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Czech J. Food Sci.

Leszczyńska J.,

Diowksz A., Lącka A.,

Wolska K., Bartos A.:

Evaluation of immunore activity of wheat bread made from fermented wheat flour

Czech J. Food Sci., 30 (2012): 336-342

Combined culture of lactic acid bacteria (*Lactobacillus brevis*, *L. plantarum* i *L. sanfranciscencis*) and baker' s yeasts was used in order to reduce immunoreactivity of gluten from wheat. Flour and dough samples were analysed in terms of lactic acid fermentation and thermal processing. Their immunoreactivity was determined with ELISA method using both anti-gliadin antibodies from patients suffering from coeliac disease and rabbit anti-QQQPP peptide (main epitope of flour allergen) antibodies. Also, immunoreactivity was measured in the final products after simulated digestion. The obtained total effectiveness of the fermentation and digestion processes amounted to less

than 30% relative to immunoreactivity of human anti-gliadin antibodies and less than 10% relative to immunoreactivity of anti-QQQPP peptide antibodies as compared to the baking made with non-fermented flour.

Keywords:

gliadins; immunoreactivity; lactic acid bacteria; bread, wheat

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